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## Fish as a companion animal

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### Abstract

The concept of pet animals encompasses a broad spectrum, with fish emerging as increasingly popular companions within households worldwide. This article delves into the rationale behind the rise of fish as preferred pets, highlighting their simplicity in care, minimal space requirements, and hypoallergenic nature. Their visual appeal, coupled with therapeutic benefits, make them ideal for enhancing both personal and public spaces. Additionally, the educational value they offer, especially for children, cannot be overstated, with opportunities to learn about aquatic ecosystems and responsible pet ownership. However, despite their popularity, ensuring the well-being of pet fish requires a nuanced understanding of their care and husbandry. Factors such as tank size, water quality, proper feeding, and compatibility among species are paramount. Neglect stemming from a lack of comprehension regarding their needs remains a significant challenge, potentially compromising the welfare of these sentient beings. In conclusion, this article emphasizes the importance of bridging the knowledge gap surrounding fish care to ensure their thriving existence as valued companions. With proper attention and care, fish can indeed enrich human lives, offering beauty, relaxation, and a deeper connection to the natural world within the confines of home environments.

**Keywords:** Fish, pet, companion, care, husbandry

### Introduction

The term “pet animal” is used in various ways, sometimes including, sometimes excluding the usual “companion animals” such as dogs and cats. Pet animal means any animal kept or intended to be kept by man, in particular in a household, for private enjoyment and companionship. Nowadays pet fish are the most popular companion animals maintained by the public.

Fish is one of the most highly utilised vertebrate taxa by humans; they are harvested from wild stocks as part of global fishing industries, grown under intensive aquaculture conditions, are the most common pet and are widely used for scientific research. The keeping of fish as pets is a hobby with a long history. In recent years, particularly during the past decade, ornamental pond fish including Koi and Goldfish have become increasingly popular in various parts of the world. These animals are well known because they can be seen every day in the home aquarium, ornamental pond, pet store, and public aquarium.

### The concept of keeping fish as companion animals

It explores the idea of fish being chosen as pets primarily for companionship purposes rather than for other uses such as food or research. The response provides an explanation of why fish are popular as companion animals, highlighting factors are mentioned below:

**Simple feeding:** Feeding fish is usually straightforward. Most fish can be fed once or twice a day with commercial fish flakes or pellets. Some species even feed on algae or detritus in the tank, reducing the need for frequent feeding.

**Limited space requirements:** Fish tanks come in various sizes, but even a small tank can provide a suitable environment for fish to live in. This makes them suitable for people with limited space in their homes.

**Low waste production:** Fish produce relatively small amounts of waste compared to larger pets like dogs or cats. With proper filtration and regular water changes, maintaining water quality in the tank is manageable.

**Lower risk of allergies:** Many people are allergic to pet dander, which can be a concern with furry pets like cats and dogs. Fish do not produce dander, making them a hypoallergenic option for pet owners.

**Quiet environment:** Fish tanks are generally quiet compared to other pets. They don't bark, meow, or make other loud noises, which can be advantageous for people living in apartments or shared spaces.

**Relatively inexpensive:** While the initial setup cost for a fish tank can vary depending on size and equipment, the ongoing expenses for maintaining fish are generally lower.

**Visual appeal:** The visual appearance of a fish tank can offer several benefits, both aesthetically and psychologically.

**Aesthetic pleasure:** Fish tanks can be visually stunning, with colourful fish, lush plants, and interesting decorations creating a beautiful underwater landscape. Many people find watching fish swim in an aquarium to be calming and aesthetically pleasing. stress reduction: studies have shown that watching fish swim in an aquarium can have a calming effect on people, reducing stress and anxiety levels. The gentle movements of the fish and the tranquil environment of the tank can promote relaxation and mental well-being. therapeutic benefits: some healthcare settings, such as hospitals and nursing homes, incorporate aquariums as part of therapy programs. Watching fish can help distract patients from pain or discomfort, improve mood, and provide a sense of comfort and companionship. decorative element: a well-maintained fish tank can enhance the visual appeal of a room or space, serving as a decorative element. With the variety of fish species, plants, and decorations available, aquariums can be customized to complement any decor style. conversation starter: fish tanks can be a conversation starter and a focal point in social settings. Guests and visitors may be drawn to the aquarium, sparking discussions about fish, aquatic life, and the hobby of fishkeeping. Overall, the visual appearance of a fish tank can contribute to a sense of beauty, tranquillity, and well-being in both personal and public spaces.

**Educational value:** Keeping fish can be educational, especially for children. It provides an opportunity to learn about aquatic ecosystems, fish behaviour, water chemistry, and the responsibility of caring for living creatures, learning about different species, and understanding the concept of aquatic environments can be both enjoyable and educational.

**Variety:** Fish represent the largest class of vertebrates, with more than 20,000 different species. This group also represents the largest number of species kept in captivity. there are likely more than 1000 different species of fish that have been maintained in captivity. A visit to a local pet store will often reveal 50 to 100 different species of fish available for sale at any given time. there are three major groups of fish kept in captivity: freshwater, brackish water, and saltwater.

**Interactive potential:** While fish may not be as interactive as mammals. unlike dogs or cats, fish don't require social

interaction or attention from their owners. They can thrive in their tank environment without the need for human interaction.

### Care and husbandry

Ornamental fish care and husbandry is one of the most important and vital components of proper aquarium and fishpond. However, it's essential to remember that while fish may be low maintenance compared to some other pets, they still require proper care and attention. Regular monitoring of water parameters, tank cleaning and appropriate feeding are crucial for the health and well-being of pet fish.

**Tank size:** Different fish species have different space requirements. Choosing the correct size of tank is an easy task. The main principle to remember is that bigger really is better. The larger tanks provide an even more stable environment for fish. A common misconception is that the smaller tank will be easier to maintain. The amount of gas exchange is dependent on surface volume.

**Water quality:** Maintaining good water quality is crucial for the health of your fish. Water-quality problems may account for 80% or more of fish disease problems seen by many veterinary practices. Water can kill fish directly, conditions that are consistent with poor water quality, such as overcrowding, overfeeding, or inadequate filtration, may favor "blooms" of opportunistic bacteria, protozoa, or fungi. A brief review of water quality for fish is presented here, this involves regular water changes, monitoring ammonia, nitrite, and nitrate levels, and ensuring proper filtration.

Water testing should be done daily for new aquaria until the system has cycled. Ammonia, nitrite, and nitrate: ammonia is produced in fish as an end product of protein catabolism. Ammonia is soluble in water, and minimal amounts are lost through evaporation. In a closed system, such as an aquarium or backyard pond, ammonia levels can build up to toxic quantities (>1 ppm). Testing for ammonia should be done weekly using a standardized commercial test kit. In nitrogen cycle first step in the cycle is to convert ammonia to nitrite. Which responsible for nitrite poisoning. The second step of the nitrogen cycle occurs when oxidizes nitrite to nitrate. Reports of nitrate toxicity are rare in freshwater and saltwater fish. Nitrate is utilized by plants and algae as a food source. Nitrate can be removed from an aquatic system by performing regular water changes. Ammonia and nitrite levels in an aquatic system may rise soon after treatment of the water with antibacterial compounds or a reduction in water temperature. New tank syndrome: new tank syndrome is a common occurrence with beginner aquarists and primarily occurs when fish are overstocked in a new aquarium. Old tank syndrome this usually occurs when frequent water changes are not performed. Oxygen: in the aquatic system, oxygen diffuses into water at the surface when the surface tension of the water is broken. For home aquaria, this occurs regularly when external filters are used that "drop" the water back into the tank like a waterfall or when air stones are used. In most cases, a dissolved oxygen (do) greater than 5 ppm is sufficient to maintain fish. Water pH: the pH of water is measured by taking the negative logarithm of hydrogen ions in the water. The pH in most aquaria and ponds should fall between 6.5 and 8.5. If the pH is allowed to fluctuate, fish will become stressed and more susceptible to disease. There are a number of factors that may affect the pH in an aquarium or pond, including the biologic filter, fish density, vegetation, and

algae. Carbon dioxide promotes acid production and can actually decrease the pH (acidic). Chlorine: chlorine is an elemental gas that is added to municipal water as a disinfectant. Unfortunately, chlorine is also toxic to fish. Fish that are exposed to chlorinated water can develop life threatening respiratory distress. Hardness: hardness measures the quantity of divalent cations (e.g., calcium and magnesium) in the water. The general range for hardness in freshwater systems is 0 to 250 mg/l, whereas in saltwater systems, hardness can exceed 10,000 mg/l. Temperature: fish are ectothermic animals. As such, the temperature of their environment is the temperature of their body. Many of the fishes kept by hobbyists are tropical fishes, and should be maintained between 23 to 26°C (73.4 to 78.8°F). Most fish are designed, metabolically, to operate in a specific temperature range. These can be broadly defined as cold water, cool water, and warm water. In addition to its direct effect on animal health and immunocompetence, many infectious diseases occur in very specific temperature ranges, particularly important for viral diseases.

**Feeding:** Fish need to be fed a balanced diet appropriate for their species. Overfeeding can lead to water quality issues and health problems, so it's important to feed them appropriately. Natural diets of most fishes are rich in protein. Dietary fats represent a significant source of energy for fish. Fish digest carbohydrates at a lower rate than do higher vertebrates. The incredible diversity of fishes means that their diet is also diverse. Some fishes are omnivores, some herbivores and others carnivores. Unfortunately, many hobbyists do not research the fish they keep and consequently, do not provide an appropriate diet for the species they are trying to maintain. Many keep carnivores and herbivores in the same tank, which makes it difficult to feed each dietary group appropriate food. In addition, little research has been done on the dietary requirements of ornamental fishes, so commercially prepared foods may be inadequate. Herbivores, in general, may be more difficult to keep in captivity because of the complexity of their dietary needs. Some species that have evolved to feed on algae that are found on rocks close to the water surface. Good vegetables to use to feed herbivorous fish. Omnivores, as a general group, may be the easiest to maintain in an aquarium. Omnivores by definition, eat a wide variety of food items including plant and animal material, and possibly some detritus as well. There are a number of carnivorous species maintained in home aquaria. The inexperienced aquarist may not realize they have placed a major predator in their peaceful community tank. Some carnivores are piscivorous, and may eat only live fish. Little or no energy is expended by most fish to maintain their body temperature or position in the water, as the normal body temperature for most fish is about the same as the environmental temperature. A general rule of thumb for feeding fish is to only offer what they can eat in a 2- to 5-minute period.

**Compatibility:** Not all fish species are compatible with each other. Some may be aggressive towards others, while some may have specific temperature or water parameter requirements. Researching the compatibility of different species is essential for a harmonious aquarium community.

**Filtration:** There are three types of filtrations—biological, chemical, and mechanical, and all may be used separately or combined into one filter. All fish tanks must have a biological filter; the need for chemical and mechanical filtration depends on the stocking density of the fish. Biological filters come in many forms. They may be as simple as a sponge filter or more

advanced like a fluidized sand filter. All provide a surface for attachment, water, and oxygen for nitrifying bacteria. Mechanical filters consist of a material that traps debris. The material may be a sponge or floss. Chemical filters usually contain granular activated carbon (GAC), which adsorbs organics such as humic substances, which may colour the water. This is of particular concern if GAC is being used to remove chlorine from city water.

### Conclusion

One significant factor contributing to the plight of pet fish is the pervasive lack of understanding about their needs. Unlike more visibly expressive animals like dogs or cats, fish behaviour and requirements can be easily misinterpreted or overlooked. This knowledge gap leads to improper housing, feeding, and overall neglect in many instances. Evidence strongly suggests that fish are sentient and the evidence that they are capable of feeling pain in a manner similar to humans is gradually mounting.

This article reviewed the basic concepts of water quality, feeding, selection of fish group and how fish well-being for human life. By considering these factors and providing proper care, fish can make wonderful companion animals, bringing beauty, relaxation, and a sense of connection to the natural world into your home.

### Conflict of Interest

Not available

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